AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of driving a liquid crystal display, comprising:

setting reference modulated data for each pixel in a current frame, wherein the reference modulated data is based upon the difference between a brightness value of the pixel in the current frame and a brightness value of the pixel for a previous frame;

detecting a driving frequency of video image data for [[a]] the current frame ~~by counting the video image data~~; and

adjusting the reference modulated data in accordance with the detected driving frequency to modulate the video image data.

2. (Original) The method according to claim 1, wherein the reference modulated data are set based on a desired reference frequency.

3. (Previously Presented) The method according to claim 1, further comprising:

dividing the video image data into most significant bits and least significant bits; and

delaying the most significant bits for one frame period.

4. (Original) The method according to claim 3, wherein the delayed most significant bits are compared with current most significant bits to select the reference modulated data from a look-up table based on the compared result.

5. (Previously Presented) The method according to claim 1, wherein the reference modulated data (VMdata) are adjusted in accordance with the driving frequency by using one of the following equations if the video image data of the current frame become larger than that of a previous frame,

$$VMdata = LRef \times (Ft/Fref)$$

$$VMdata = LRef^{(Ft/Fref)}$$

where LRef represents the reference modulated data, Fref is the reference frequency, and Ft represents the detected driving frequency.

6. (Previously Presented) The method according to claim 1, wherein the reference modulated data (VMdata) are adjusted in accordance with the driving frequency by using one of the following equations if the video image data of the current frame become smaller than that of a previous frame,

$$VMdata = LRef \times (Fref/Ft)$$

$$VMdata = LRef^{(Fref/Ft)}$$

where LRef represents the reference modulated data, Fref is the reference frequency, and Ft represents the detected driving frequency.

7. (Previously Presented) The method according to claim 1, wherein the reference modulated data bypass into an output stage if the video image data of the current frame are equal to that of a previous frame.

8. (Currently Amended) A method of driving a liquid crystal display, comprising:

setting reference modulated data for each pixel in a current frame, wherein the reference modulated data is based upon the difference between a brightness value of the pixel in the current frame and a brightness value of the pixel for a previous frame;

dividing a frequency band for each constant frequency band;

setting a different weighting value for each frequency band;

detecting a driving frequency of video image data;

determining the frequency band including the detected driving frequency; and

assigning a weighting value of the frequency band including the driving frequency to the reference modulated data to adjust the reference modulated data, thereby modulating the video image data.

9. (Original) The method according to claim 8, wherein the reference modulated data are based on a desired reference frequency.

10. (Currently Amended) A driving apparatus for a liquid crystal display, comprising:

a mode detector detecting a driving frequency of current video image data; and

a modulator selecting reference modulated data for each pixel in a current frame, wherein the reference modulated data is based upon the difference between a brightness value of the pixel in the current frame and a brightness value of the pixel for a previous frame ~~from previously registered data~~ and adjusting the selected reference modulated data in accordance with the detected driving frequency.

11. (Previously Presented) The driving apparatus according to claim 10, wherein the modulator includes a frame memory delaying most significant bits of the current video image data for one frame period.

12. (Original) The driving apparatus according to claim 11, wherein the modulator compares the delayed most significant bits with current most significant bits to select the reference modulated data based on the compared result.

13. (Previously Presented) The driving apparatus according to claim 11, wherein the modulator adjusts the reference modulated data (VMdata) using one of the following equations if the current video image data become larger than the delayed video image data,

$$VMdata = LRef \times (Ft/Fref)$$

$$VMdata = LRef^{(Ft/Fref)}$$

where LRef represents the reference modulated data, Fref is the reference frequency, and Ft represents the detected driving frequency.

14. (Previously Presented) The driving apparatus according to claim 11, wherein the modulator adjusts the reference modulated data (VMdata) by using one of the following equations if the current video image data become smaller than the delayed video image data,

$$VMdata = LRef \times (Fref/Ft)$$

$$VMdata = LRef^{(Fref/Ft)}$$

where LRef represents the reference modulated data, Fref is the reference frequency, and Ft represents the detected driving frequency.

15. (Previously Presented) The driving apparatus according to claim 11, wherein the reference modulated data bypass into an output stage if the current video image data are equal to the delayed video image data.

16. (Previously Presented) The driving apparatus according to claim 10, further comprising:

a data driver applying data outputted from the modulator to a liquid crystal display panel;

a gate driver applying a scanning signal to the liquid crystal display panel; and

a timing controller applying the current video image data to the modulator and the mode detector and controlling the data driver and the gate driver.

17. (Currently Amended) A driving apparatus for a liquid crystal display, comprising:

a mode detector detecting a driving frequency of current video image data; and

a modulator selecting reference modulated data for each pixel in a current frame, wherein the reference modulated data is based upon the difference between a brightness value of the pixel in the current frame and a brightness value of the pixel for a previous frame ~~from previously registered data~~, setting a different weighting value for each frequency band having a plurality of frequency ranges, and assigning a weighting value of the frequency band including the detected frequency to the reference modulated data.

18. (Previously Presented) The driving apparatus according to claim 17, further comprising:

a data driver applying data modulated by the modulator to a liquid crystal display panel;

a gate driver applying a scanning signal to the liquid crystal display panel; and

a timing controller applying the current video image data to the modulator and the mode detector and controlling the data driver and the gate driver.

19. (Previously Presented) The driving apparatus according to claim 10, wherein the modulator comprises:

a frame memory storing most significant bits of a current frame and outputting the most significant bits of a previous frame;

a reference look-up table comparing the current most significant bits with the previous most significant bits and outputting reference modulated data; and

an operator adjusting the reference modulated data, so that a response time of a liquid crystal is varied in accordance with a driving frequency.

20. (Currently Amended) A liquid crystal display comprising:

a liquid crystal display panel having a plurality of data lines and a plurality of gate lines thereon;

a mode detector detecting a driving frequency of current video image data;

a modulator selecting reference modulated data for each pixel in a current frame, wherein the reference modulated data is based upon the difference between a brightness value of the pixel in the current frame and a brightness value of the pixel for a previous frame ~~from previously registered data~~ and adjusting the selected reference modulated data in accordance with the detected driving frequency;

a data driver applying the data modulated by the modulator to the liquid crystal display panel;

a gate driver applying a scanning signal to the liquid crystal display panel; and

a timing controller applying the current video image data to the modulator and the mode detector and controlling the data driver and the gate driver.

21. (Currently Amended) A liquid crystal display comprising:

a liquid crystal display panel having a plurality of data lines and a plurality of gate lines thereon;

a mode detector detecting a driving frequency of current video image data;

a modulator selecting reference modulated data for each pixel in a current frame, wherein the reference modulated data is based upon the difference between a brightness value of the pixel in the current frame and a brightness value of the pixel for a previous frame, setting a different weighting value for each frequency band having a plurality of frequency ranges and assigning a weighting value of the frequency band including the detected frequency of the reference modulated data;

a data driver applying the data modulated by the modulator to the liquid crystal display panel;

a gate driver applying a scanning signal to the liquid crystal display panel; and

a timing controller applying the current video image data to the modulator and the mode detector and controlling the data driver and the gate driver.